

NOTES ON THE GENUS SOBRALIA

BY

CHARLES SCHWEINFURTH

THE FOLLOWING NOTES on *Sobralia* include reductions occasioned by a critical study of Peruvian orchidaceae and the description of a new species of that genus from Costa Rica.

Sobralia dichotoma Ruiz & Pavon Syst. Veg. Fl. Peruv. et Chil. (1798) 232—Poeppig & Endlicher Nov. Gen. ac Sp. Pl. 1 (1835) 54.

Sobralia Mandonii Reichenbach filius Xen. Orch. 2 (1873) 175, t. 175, fig. I, 1.

In erecting his new concept, *Sobralia Mandonii*, Reichenbach used as his major point of distinction from *S. dichotoma* the fact that the peduncles were simple and straight, whereas those of *S. dichotoma* were dichotomous and fractiflex. To be sure, the inflorescences in the isotypes of *S. Mandonii* in the Herbarium of Oakes Ames and in the Gray Herbarium are simple, as well as in several Peruvian collections apparently referable to that species. One Peruvian collection of this complex (*F. L. Herrera 3230*), however, bears one simple peduncle and one dichotomous peduncle, thus indicating that the character is a variable one. Furthermore, in all collections of this complex, whether they have a simple or dichotomous inflorescence, the rachis is more or less fractiflex.

In both concepts the petals appear to have a more or less undulate upper margin.

In his description of *S. Mandonii* Reichenbach says that the lip is simple, whereas he implies that the lip of *S. dichotoma* is 3-lobed, a character which is definitely imputed to *S. dichotoma* by Lindley. (Fol. Orch. *Sobralia* (1854) p. 2) However, Poeppig and Endlicher (l.c.) make

no mention of such a character in the lip of *S. dichotoma*. Certainly no definite lobing is shown in the lip of the plants which are reasonably identified with *S. dichotoma*, although the plicated margin of the lips of both species frequently make the outline appear somewhat 3-lobed.

It is significant that a flower of a specimen doubtless referable to *S. dichotoma* (with a much branched inflorescence) appears to be nearly identical with a flower of the isotype of *S. Mandonii*.

Sobralia scopulorum *Reichenbach filius* Xen. Orch. 2 (1873) 176, t. 175, fig. II, 2-3.

Sobralia alstroemerioides Schlechter in Fedde Repert. Beihefte 9 (1921) 43; 57 (1929) t. 102, Nr. 398.

From a careful study of the descriptions of the two species illustrated by floral analyses, there seems to be no doubt that they are conspecific and that the collection attributed by Kränzlin (in Weberbauer Pflanzenw. Peruv. And. (1911) 239) to *S. scopulorum* was correctly interpreted. In fact the difference in the structure of the lips, which is relied upon for the separation of the two concepts, appears to be inconsequential. The flowers are practically identical in appearance.

The only significant difference to be noted is that the stem of *S. scopulorum* is said to be "spithamaeus" (about 17.7 cm. high) while that of *S. alstroemerioides* Schltr. is described as "c. metralis" (about 100 cm. high), but in *Sobralia* the height of the flowering stem is very variable.

Sobralia undatocarinata *C. Schweinfurth* sp. nov.

Herba robusta, terrestris vel epiphytica. Caulis elatus, inferne vaginis tubularibus et superne foliis ornatus. Folia elliptico-lanceolata, valde acuminata. Flores e bracteis erectis imbricantibus nonnullis erumpentes. Sepala similia, lanceolato- vel elliptico-oblonga. Petala sepalis sim-

ilia, tenuiora. Labellum in circuitu oblongo-ovatum, apice bidentatum; discus carinis undulatis novem ornatus. Columna pergracilis, arcuatus, apice cum brachiis binis triangulari-lanceolatis.

Plant stout, terrestrial or epiphytic. Stem present up to about 13.7 dm. tall, about 7 mm. in diameter near the base, woody, provided below with remote close tubular sheaths which are 8.3 cm. or less long and above by about four leaves. Leaves elliptic-lanceolate, up to 23.5 cm. long and 7.9 cm. wide, long-acuminate to an acute point, cuneate below, chartaceous when dry, with about eleven conspicuous nerves beneath. Inflorescence consisting of one or more showy flowers emerging from a cluster of erect imbricating bracts, the lowermost and largest bract consisting of an ovate-lanceolate blade about 8.2 cm. long which is articulated to a sheath about 3.8 cm. long. Flowers nodding before expansion, white with the lip striped with purple. Dorsal sepal connate with the lateral sepals at the base, lanceolate-oblong, free part about 4.5 cm. long and 13 mm. wide, obtuse with a dorsal mucro, comparatively firm in texture, 11-nerved. Lateral sepals similar to the dorsal sepal, elliptic-oblong, the free portion about 4.5 cm. long and 13 mm. wide, acute and mucronate, 11-nerved. Petals oblong-elliptic, obtuse, about 4.5 cm. long and 14 mm. wide, 9-nerved, thinner in texture than the sepals. Lip oblong-ovate in outline with the basal third round-dilated and the apex strongly bilobed, about 4.7 cm. long from the base to the tip of an apical lobule and 2.8 cm. wide across the dilated basal portion. Disc provided near the base with a small fleshy transverse keel and in front with nine thin longitudinal keels; the outermost keel consists of a relatively high thin plate extending about to the middle of the disc; the next inner keel is similar but diminishes in height and extends as a wavy keel to about one third the distance to the apex;

the two pairs of keels on either side of the center are low and undulate running nearly to the apex of the lamina; the central keel appears to originate near the anterior third of the disc and, increasing in height, to extend as an undulate ridge nearly to the apex. Column very slender, arcuate, about 3.1 cm. long, dilated above, with a pair of triangular-lanceolate arms.

Another collection (*Manuel Valerio 2412*) is referable to this species. However, it is rather more slender than the type. Its leaves are slightly longer and narrower, up to 26 cm. long and 7 cm. wide. Its flowers are rather smaller, the sepals, petals and lip being about 3.5–3.8 cm. long and the outer keels on the disc of the lip are reduced in size.

Sobralia undatocarinata appears to be related to *S. luteola* Rolfe from which it differs in having ecarinate lateral sepals and in the lip lacking fimbriate-pilose nerves.

COSTA RICA: La Estrella de Cartago, "Flor blanca con el labelo listado de púrpura. . . . Comprada a un campesino", August 22, 1933, *A.M. Brenes 206* (TYPE in Herb. Ames No. 46367); La Palma, at 1500 meters altitude, "Flor blanca, lustrosa, con el centro interior del petalo central lila morado—Una o mas flores en cada inflorescencia—Florece en agosto y setiembre—Confinada a determinada zona en La Palma—Epifita o terrestre—", August 16, 1937, *Manuel Valerio 2412*.